UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 09/831,094 | 11/21/2001 | Elisa J. Bernklau | 2730-65-PUS | 8451 |

7590 05/20/2003

Joseph E Kovarik
1560 Broadway Suite 1200
Denver, CO 80202-5141

| EXAMINER |
|---|
| ARK, DARREN W |

| ART UNIT | PAPER NUMBER |
|---|---|
| 3643 | |

DATE MAILED: 05/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. 09/831,094 | Applicant(s) BERNKLAU ET AL. |
|---|---|---|
| | Examiner Darren W. Ark | Art Unit 3643 |

*-- Th MAILING DATE of this communication appears on the cov r sh et with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *18 November 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *10-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 November 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *10-13*
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to because Graphs 1A & 2A (on pg. 18), 3A (pg. 19), 2A & B (pg. 22), 3A & 3B (pg. 25), 4A & B (pg. 28), 5A-C (pg. 31), 6A-C (pg. 34), 7A-C (pg. 37), 8A & B (pg. 43), 8C (pg. 44), 9 (pg. 48), 10 (pg. 51), 11 (pg. 54), 12A & B (pg. 58), 12C & D (pg. 59), 14 (pg. 64), 15 (pg. 67), 18-1 (pg. 99), 18-2 (pg. 100), 18-3 (pg. 101), 18-4 (pg. 102), 18-5 (pg. 103), 18-6 (pg. 104), 18-7 (pg. 105), 18-8 (pg. 106), 18-9 (pg. 107), 19-1 (pg. 131), 19-2 (pg. 132), 19-3 (pg. 133), 19-4 (pg. 134), 19-5 (pg. 135), 19-6 (pg. 136) which appear in the body of the specification should be converted into Figures. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### *Claim Objections*

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 20-56 been renumbered 10-46. The Examiner would like to indicate to applicant that in the amendment filed 11/18/02 that claims 1-9 should have been canceled instead of claims 1-19 (claims 10-19 did not exist previously).

3. Claim 27 is objected to because of the following informalities:

Claim 27, line 1, "6" should be "26".

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 10-24, 46 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 10, the phrases "wherein when said enclosure...is positioned at a location..." and "said concentration is maintained in an area about said enclosure for at least two weeks..." render the claim vague and indefinite since these are not positive recitations of method steps involved in using the enclosure. This phrase are more suited to be used as functional language in an apparatus claim. There must be a positive recitation of a step of "positioning the enclosure at a location..." and "maintaining said concentration in an area about said enclosure for at least two weeks...". Also see claim 46 for the same problem.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 10, 11, 16, 21, 25, 26, 31, 36, 43-46 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Schmittmann 5,394,643.

Schmittman discloses providing an enclosure (3) having openings (bottom of the dome provides many openings from different directions); providing in the enclosure an emitting source for emitting $CO_2$ ($CO_2$ gas, liquid $CO_2$, or carbon dioxide snow); positioning at a location such that a concentration of the gas is emitted from the openings (goes into the ground from the bottom of dome) so that when the concentration is encountered by the termites ($CO_2$ will gradually reach attractive levels for termites), the termites are attracted to the emitting source; wherein the concentration is approximately at least 0.2% by volume of an ambient atmosphere (up to 30%) and the concentration is maintained in an area about the enclosure for at least two weeks (see col. 4, lines 22-29; wherein the treated sites were treated until the insects were destroyed, ie. however long it takes).

In regard to claims 16 and 31, see the Figure.

In regard to claim 44, the concentration is maintained by the dome being positioned tightly against the ground.

8. Claims 10-14, 16, 18, 19, 21, 25-29, 31, 33, 34, 36, 40-46 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Snell et al. 6,158,166.

Snell et al. discloses providing an enclosure (10c or 182) having openings (see Figs. 31-33 or Figs. 43-49); providing in the enclosure an emitting source for emitting $CO_2$ ($CO_2$ source in 242 and released from holes 240 or expanded polystyrene attractive to termites); positioning at a location such that a concentration of the gas is emitted from the openings (240 or see holes of 182 in Figs. 43 & 44) so that when the concentration is encountered by the termites ($CO_2$ intended to attract termites), the termites are attracted to the emitting source; wherein the concentration is approximately at least 0.2% by volume of an ambient atmosphere (sufficient level to attract termites) and the concentration is maintained in an area about the enclosure for at least two weeks (termite tube maintained in place examined over time for termite damage while leaving 182 in place during that time).

In regard to claims 18 and 33, Snell et al. discloses an insecticide (termiticide) and other attractants (see col. 13, last paragraph and col. 14, lines 1 & 2).

In regard to claims 19 and 34, Snell et al. discloses pheromones (see col. 13, last line).

In regard to claims 16 and 31, Snell et al. discloses soil in the enclosure (when 182 is placed in the ground it is inherent that soil will enter the holes 358 and any other opening under ground).

***Claim R jections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 11, 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmittmann 5,394,643.

Schmittmann discloses a 30% concentration, but does not disclose the range extending to about 50%. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ a concentration in a range extending to about 50%, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art, and because a person of ordinary skill in the art would readily experiment to find the concentration necessary to kill the desired insects. *In re Aller,* 105 USPQ 233.

11. Claims 10-14, 16-19, 21, 23-29, 31-34, 36, 38-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snell et al. 6,158,166 in view of "Immediate and Latent Effects of Carbon Dioxide on Insects" by Gerard Nicolas.

Snell et al. discloses a termite attractive material (364) which releases gases such as carbon dioxide which serve as an intoxicant-type attractant to termites, but does not particularly disclose a concentration of $CO_2$ being approximately 0.2% by volume of an ambient atmosphere. Nicolas discloses that $CO_2$ is a known attractant for

many invertebrates, which perform oriented responses to a $CO_2$ gradient, and that some species live in environments with higher $CO_2$ and lower $O_2$ contents than those of the normal atmosphere. Within the nests of termites of the subfamily Macrotermitinae, $CO_2$ concentrations ranging from 0.8 to 2.9% and from 1.2 to 5.2% have been recorded. It would have been obvious to a person of ordinary skill in the art to make the concentration of $CO_2$ in the device of Snell et al. such that it is approximately 0.2% by volume of an ambient atmosphere in view of Nicolas in order to provide a $CO_2$ gradient which is attractive and familiar to the termites so that they can be effectively attracted to the termite control device of Snell et al.

In regard to claims 17 and 32, Snell et al. and Nicolas recognize the importance of a moist environment (Snell et al.), but do not particularly disclose using soil with a moisture content of approximately 20%. It would have been an obvious matter of design choice to employ a soil with a moisture content of approximately 20% since by doing so would provide a means for retaining the moisture (the soil) and would provide a moist environment which is further attractive to the termites and also would allow the termites to establish their galleries/tunnels by which they travel to and from the bait.

In regard to claims 23, 24, 38, and 39, Snell et al. discloses the use of cavities (366, 368) to store food such as sawdust, wood or wood byproducts as additional attractants, but does not disclose burned or charred materials. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ burned or charred materials, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the

intended use as a matter of obvious design choice, and because termites' place in the animal kingdom is to decompose material which is rotting or destroyed so that its nutrients may eventually be returned to the earth and the termites are particularly attracted to items which are in a state of decay. *In re Leshin,* 125 USPQ 416.

In regard to claim 41, Snell et al. discloses openings (358) for termites, but does not disclose the openings be approximately 3 mm in diameter. It would have been an obvious matter of design choice to make the openings 3 mm in diameter in order to properly size the openings such that they are large enough to admit termites into the device so that they may consume the bait therein.

12. Claims 15, 22, 30, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snell et al. 6,158,166 in view of "Immediate and Latent Effects of Carbon Dioxide on Insects" by Gerard Nicolas as applied to claims 10, 25 above, and further in view of Waters, Jr. 4,506,473.

Snell et al. and Nicolas disclose the device with cavities (368 of Snell et al.) which may hold attractants such as water to stimulate termite activity, but do not disclose the emitting source which comprises a form of carbonate. Waters, Jr. discloses $CO_2$ generated by reacting a carbonate salt with an aqueous acid solution. It would have been obvious to a person of ordinary skill in the art to substitute the expanded polystyrene of Snell et al. for the carbonate of Waters, Jr. which generates $CO_2$ very cheaply and is easily replenish-able when desired whereas the expanded polystyrene may eventually evaporate all of its $CO_2$ over time.

13. Claims 20, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snell et al. 6,158,166 in view of "Immediate and Latent Effects of Carbon Dioxide on Insects" by Gerard Nicolas as applied to claims 10, 25 above, and further in view of Sherman 4,608,774.

Snell et al. and Nicolas disclose the device with cavities (368 of Snell et al.) which may hold attractants such as water to stimulate termite activity, but do not disclose the emitting source which comprises a microorganism generating the concentration. Sherman discloses the emitting source which comprises a microorganism (yeast) generating the concentration. It would have been obvious to a person of ordinary skill in the art to substitute the expanded polystyrene of Snell et al. for the microorganism of Sherman which generates $CO_2$ very cheaply and is easily replenish-able when desired whereas the expanded polystyrene may eventually evaporate all of its $CO_2$ over time.

14. Claims 17, 23, 24, 32, 38, 39, 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snell et al. 6,158,166.

In regard to claims 17 and 32, Snell et al. recognizes the importance of a moist environment (Snell et al.), but do not particularly disclose using soil with a moisture content of approximately 20%. It would have been an obvious matter of design choice to employ a soil with a moisture content of approximately 20% since by doing so would provide a means for retaining the moisture (the soil) and would provide a moist environment which is further attractive to the termites and also would allow the termites to establish their galleries/tunnels by which they travel to and from the bait.

In regard to claims 23, 24, 38, and 39, Snell et al. discloses the use of cavities (366, 368) to store food such as sawdust, wood or wood byproducts as additional attractants, but does not disclose burned or charred materials. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ burned or charred materials, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice, and because termites' place in the animal kingdom is to decompose material which is rotting or destroyed so that its nutrients may eventually be returned to the earth and the termites are particularly attracted to items which are in a state of decay. *In re Leshin,* 125 USPQ 416.

In regard to claim 41, Snell et al. discloses openings (358) for termites, but does not disclose the openings be approximately 3 mm in diameter. It would have been an obvious matter of design choice to make the openings 3 mm in diameter in order to properly size the openings such that they are large enough to admit termites into the device so that they may consume the bait therein.

15. Claims 15, 22, 30, 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snell et al. 6,158,166 in view of Waters, Jr. 4,506,473.

Snell et al. discloses the device with cavities (368 of Snell et al.) which may hold attractants such as water to stimulate termite activity, but do not disclose the emitting source which comprises a form of carbonate. Waters, Jr. discloses $CO_2$ generated by reacting a carbonate salt with an aqueous acid solution. It would have been obvious to a person of ordinary skill in the art to substitute the expanded polystyrene of Snell et al.

for the carbonate of Waters, Jr. which generates $CO_2$ very cheaply and is easily replenish-able when desired whereas the expanded polystyrene may eventually evaporate all of its $CO_2$ over time.

16. Claims 20, 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Snell et al. 6,158,166 in view of Sherman 4,608,774.

Snell et al. discloses the device with cavities (368 of Snell et al.) which may hold attractants such as water to stimulate termite activity, but do not disclose the emitting source which comprises a microorganism generating the concentration. Sherman discloses the emitting source which comprises a microorganism (yeast) generating the concentration. It would have been obvious to a person of ordinary skill in the art to substitute the expanded polystyrene of Snell et al. for the microorganism of Sherman which generates $CO_2$ very cheaply and is easily replenish-able when desired whereas the expanded polystyrene may eventually evaporate all of its $CO_2$ over time.

***Response to Arguments***

17. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darren W. Ark whose telephone number is (703) 305-3733. The examiner can normally be reached on M-Th, 8:00am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on (703) 308-2574. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 306-4195 for regular communications and (703) 306-4195 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Darren W. Ark
Primary Examiner
Art Unit 3643

DWA
May 18, 2003